

Space Planning: A Renovation Saga Involving Library Users

Hannah F. Norton

Linda C. Butson

Michele R. Tennant

Cecilia E. Botero

ABSTRACT. From 2010-2012, librarians at the University of Florida Health Science Center Library (HSCL) used an online survey and focus groups to gather user input on preferences for an ideal library space. User input guided the HSCL's renovation plans and put a clear focus on enhancing technology, improving infrastructure, enabling group collaboration, and creating comfortable spaces. Additional communication with users during renovation was vital in ensuring continued usability of non-construction spaces and shared understanding of the construction timeline. While specific user suggestions are particular to the HSCL, overall themes and methods for eliciting input will be useful to other libraries undergoing space planning.

KEYWORDS. Communication, library as place, library planning, library spaces, learning spaces, renovation, user input

Authors.

Hannah F. Norton, MSIS, AHIP (nortonh@ufl.edu) is Reference & Liaison Librarian, University of Florida Health Science Center Libraries, PO Box 100206, Gainesville, FL, 32610.

Linda C. Butson, MLn, AHIP (butsonl@ufl.edu) is Consumer Health & Community Outreach

Librarian, University of Florida Health Science Center Libraries, PO Box 100206, Gainesville, FL 32610.

Michele R. Tennant, PhD, MLIS, AHIP (tennantm@ufl.edu) is Assistant Director, Biomedical and Health Information Services, University of Florida Health Science Center Libraries and Bioinformatics Librarian, University of Florida Genetics Institute, PO Box 103610, Gainesville, FL, 32610.

Cecilia E. Botero, MLIS, AHIP (cecbote@ufl.edu) is Associate Dean & Fackler Director, University of Florida Health Science Center Libraries, PO Box 100206, Gainesville, FL 32610.

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INTRODUCTION

The Health Science Center Library (HSCL) serves the University of Florida's six health science colleges – Dentistry, Medicine, Nursing, Pharmacy, Public Health & Health Professions, and Veterinary Medicine – as well as numerous centers and institutes, with a potential primary user base totaling more than 11,500. The facility itself is comprised of 56,000 sq. ft. of space distributed across three floors, with a total seating capacity of approximately 585 as of 2010. At that time, the library space also featured 29 study rooms, 14 for individuals and 15 for small groups. The HSCL provided 106 public computers, including seven large-screen stations designed for collaboration, a 27-seat computer lab, and eight computers within the study rooms. The 36-year old HSCL is the only major library on campus that had not, prior to 2012, undergone significant renovations.

Libraries in general, and health science libraries in particular, have experienced great change during that time period, going from storehouses of knowledge in the form of print materials to active centers for learning based around information services.¹⁻³ As print collections shrink, teaching and learning methods evolve, and users' expectations change, libraries' physical spaces are being altered to incorporate flexibility, comfortable lounge space, group study rooms and other collaborative areas, single service desks, information commons, wireless connectivity, compact shelving, artwork, conference rooms, 24/7 access,² meeting rooms, and exhibit space. There is some evidence that a library's physical space also impacts users' perceptions of the library's electronic resources,⁴ so even as collections move more and more online, it is vital that library personnel develop innovative ways to use their physical space to serve users' needs.

With a change in leadership in 2008, the HSCL's administration, librarians, and staff began a concerted effort to transform the HSCL into a relevant, comfortable, and user-focused space, with an emphasis on better two-way communication with users. Part of this change included restructuring spaces on the first and second floors, adding rolling whiteboards, and creating group collaboration stations featuring large-screen computer monitors.⁵ Anecdotal usage evidence suggested that HSCL users appreciated these new spaces. Given the positive impact of this reconfiguration, future capacity for reducing the HSCL's print footprint via a planned state-wide off-site storage facility, and support for space planning from the dean of libraries, HSCL faculty and staff began planning in 2010 for a comprehensive library renovation.

The library literature supports the idea that key steps in space planning include identifying user needs and preferences and assessing how well existing spaces accommodate those needs and preferences.⁶⁻⁹ Direct study of and conversation with library users can unseat long-held assumptions that librarians have about users' needs and interests⁶ and illuminate novel trends in their use of library and other study spaces. Beginning in the fall of 2010, HSCL librarians undertook an assessment of users' space-related needs and preferences in order to inform remodeling plans and improve library services. This assessment took the form of both an online survey of users, conducted in the fall of 2010, and a series of more in-depth focus group sessions held from April 2011 through January 2012. Input from both phases of the assessment guided decision-making surrounding current renovation of the library's first floor collaborative space as well as a number of smaller-scale adjustments that had already been made (e.g., creation of additional study rooms and purchase of new furniture). Additional informal input from and communication with users has been vital throughout the planning and renovation process. This article offers a case study of the HSCL's experiences in obtaining user input and communicating

with users throughout the space planning process and presents lessons learned by HSCL librarians and staff; it is expected that elements of this experience and the lessons learned will be useful to other libraries undergoing space planning and renovation.

METHODS

HSCL librarians obtained Behavioral/NonMedical Institutional Review Board (IRB02) approval for a two-part assessment including an eight-question, online survey and in-person open-ended focus group sessions. The online survey, with three main substantive questions, was designed for simplicity of completion with the goal of getting broad input from across the HSCL's user base. A complete list of survey questions is available in Appendix 1. Focus groups were designed to elicit more in-depth feedback from participants, with flexibility for investigators to ask follow-up questions. Questions that guided the focus group sessions are included in Appendix 2.

Requests for participation in the survey were sent to students, faculty, and staff via HSC college and department listservs. Additionally, a link to the survey was featured prominently on the HSCL website, and the survey was available to fill out in person at the library. The survey contained several demographic questions and featured three open-ended questions: "what do you like about the HSC Library's current space;" "what is missing in the HSC Library's current space;" and "what would you like to see in an ideal HSC Library space?" The survey was open for responses for four weeks. Responses were analyzed by the authors and other library staff members using an open coding approach and grouped into 13 thematic categories which are listed in the Survey Results section of this article.

Focus group participants were recruited via e-mail listservs, HSCL website announcements, and personal invitations to those within the library on the days of the sessions. A total of 12 focus group sessions were held, with 45 HSCL users participating. Two HSCL librarians facilitated each focus group session, and sessions were recorded and later transcribed. Comments were grouped into the same thematic categories used to describe the survey results.

Beyond the formal needs assessment performed through surveying and interviewing HSCL users, HSCL librarians took several additional steps related to space planning that impacted interaction with library users. Through Faculty Enhancement Opportunity or “mini-sabbatical” funding, the HSCL’s director and two other librarians were able to make three trips to out-of-state libraries in order to explore their exemplary services and facilities. Libraries visited included the Health Sciences Library at the University of Colorado Anschutz Medical Campus; the University of Colorado-Boulder’s main Norlin Library and Wise Law Library; Purdue University’s Humanities, Social Science, and Education Library and Management and Economics Library; and the University of Pittsburgh’s Health Sciences Library. Useful and attractive elements of those spaces gave HSCL librarians ideas about potential additions to the HSCL space; in many cases, furniture or design elements seen at other libraries were discussed directly with users at focus group sessions, allowing an almost immediate opportunity to gauge their reactions to particular suggestions.

Additionally, input from library users was solicited more informally later in the planning process. For instance, once the HSCL staff had selected three potential carpet and flooring options, in-person library visitors were shown the three final contenders and allowed to vote for their favorite. During the renovation itself, an HSCL librarian offered a series of “talk to us about the renovation” sessions both to provide information to users about the renovation timeline

and expectations and to allow users to offer suggestions about ways to accommodate them during the renovation. Figure 1 presents a timeline summarizing the steps HSCL took in space planning and communication with users alongside events associated with the actual renovation and construction.

[PLACE FIGURE 1 HERE]

Legend: FIGURE 1. Space Planning, Communication, and Renovation Timeline

SURVEY RESULTS

A total of 320 participants responded to the survey; of these, 200 responded to the open-ended questions about the library space. Respondents represented each of the six Health Science Center (HSC) colleges, with 8.6% of responses from Dentistry, 16.5% of responses from Medicine, 10.9% of responses from Nursing, 27.1% of responses from Pharmacy, 25.7% of responses from Public Health & Health Professions, 9.2% of responses from Veterinary Medicine, and 2.0% of responses from outside of the HSC. A majority of respondents (70.7%) were students (53.1% graduate or professional students, 17.6% undergraduates), while 19.2% identified as faculty, 7.8% identified as staff or residents, and 2.0% were from outside the university or did not identify their status.

Respondents were asked how frequently they visited the library and how frequently they used HSCL resources from outside the library, as well as what they come to the library to do. A majority of respondents were frequent HSCL visitors, with 13.6% reporting that they visit the library daily, 39.1% visiting weekly, 16.6% visiting monthly, 22.5% visiting less than once a

month, and 8.3% never coming to the library in person. Additionally, a majority of respondents were frequent HSCL resource users with 23.7% reporting that they use HSCL resources outside of the library daily, 39.0% using these resources weekly, 17.1% using these resources monthly, 13.6% using these resources less than once a month, and 6.6% never using HSCL resources outside of the library. Respondents come to the library for a variety of reasons, which are summarized in Figure 2. Respondents could select multiple options to describe what they come to the library to do, and, on average, respondents indicated three different types of activities they do at the library.

[PLACE FIGURE 2 HERE]

Legend: FIGURE 2. What do you come to the library to do?

Responses to the three open-ended questions were grouped into the following 13 thematic categories: general study space, individual study, group study, study rooms and meeting rooms, computers and technology, furniture, quiet vs. noise, ambience, lighting and windows, space to relax, copiers and printers, services and collections, and miscellaneous. Depending on the nature of the response, it may have been assigned to more than one category. Responses to these three questions are summarized in Figure 3. The three most frequent areas of comment were various study spaces, computers and technology, and furniture.

[PLACE FIGURE 3 HERE]

Legend: FIGURE 3. Summary of open-ended survey responses by category

Study Space

Study space was the most frequently addressed issue among survey participants, with a total of 312 responses across the three questions mentioning study space in general, individual study space, group study space, or study rooms. Individual study spaces are appreciated for their privacy; respondents mentioned using them to get more done, spread out away from other people, and focus on studying without distraction or disturbance. Suggested improvements to individual study space include: having more of it, larger carrels and desks, more privacy for individual work at computer stations, and better separation from group study spaces. Likewise, group study space was one of the most highly regarded aspects of the current library space, with significantly more positive comments than negative comments made about it. A wide majority of responses in this category spoke to the benefits of the library's collaboration stations with large-screen monitors; they were cited as facilitating group study, projects, and learning, as well as being beneficial when viewing pictures and slides and creating presentations. Other features conducive to group study included large tables, open areas, and the ability to talk and discuss freely. Suggested improvements to group study space included more group study space, more group tables and chairs, more and bigger group study rooms to accommodate up to eight people, and places for groups to work together without being disruptive.

Overall, respondents described the ideal library space as containing the following:

- Both individual and group study spaces
- Even more group study spaces than were currently available
- More collaboration stations with large-screen monitors
- Adequate separation of group and individual study spaces

- More and bigger group study rooms
- Plenty of open space
- Semi-private group areas

Computers and Technology

Computer and technology services are clearly one of the HSCL's major strengths and also an area in which the library's users are keenly interested. Across all three questions, 172 responses addressed computers and technology; this category had the highest number of responses (83) to the question "what do you *like* about the HSCL's current library space?" Respondents appreciated the number of computers available throughout the library but would like to have even more, particularly in study rooms and study areas. Collaboration stations with large-screen monitors were widely lauded, as was the HSCL computer lab. A number of respondents appreciated the fact that there is space around computers to spread out, but others noted the need for more privacy around computers. One major shortcoming related to technology was the lack of electrical outlets available throughout the library, particularly in group study areas.

Overall, respondents described the ideal library space as containing the following:

- Many computers, even more than were currently available
- More collaboration stations with large-screen monitors
- Ample electrical outlets throughout the library
- Bigger computer stations with more privacy
- Strong and stable wireless access
- Plans for ways to incorporate future technology

Furniture

Across all three questions, there were 132 survey responses that addressed the furniture in the library. The most frequent responses about furniture stated that there were not enough tables and chairs and that the seating available in the library was uncomfortable. Respondents called for more chairs that could be easily moved when groups are working on a project as well as additional tables for group study, particularly larger tables that could accommodate as many as five to eight people. Respondents also wanted more comfortable chairs and larger carrels that could accommodate both laptops and printed study materials.

Overall, respondents described the ideal library space as containing the following:

- Modern furniture
- Comfortable seating throughout the library
- Comfortable lounge areas and casual study spaces for leisure reading and relaxing including sofas and benches
- Better computer and desk spaces, larger cubicles to accommodate laptops, books, and belongings
- More tables

USING SURVEY DATA FOR SPACE IMPROVEMENTS

Although formal renovation planning had not yet started, throughout 2011 HSCL leadership used the insights gleaned from survey responses to make some immediate changes to the library's

space and continue some improvements that had already been planned. The number of public computers available throughout the library was increased in response to survey input that more computers were needed. As furniture was a major area of concern illuminated by the survey, a number of tables for group study and rolling chairs were purchased for use on the library's first floor. Additionally, seven new study rooms were created out of spaces previously used as staff offices or for storage. These new study rooms were painted and equipped with whiteboards and computer work stations.

More dramatically, in the summer of 2011, all print materials were shifted off of the first floor of the library to create additional dedicated space there for collaborative work and group study. Prior to the collection shift, the first floor housed the HSCL's monograph, reference, and audiovisual materials collections as well as being the primary location for collaborative study stations with large-screen monitors. The second floor housed print journals from 1990 to the present, and the third floor housed the print journals from earlier than 1990 and served as quiet study space. By discarding volumes that were duplicated by UF's electronic holdings or by print copies elsewhere on campus, HSCL Content Management and Access Services staff were able to consolidate the journal collection to the third floor. Subsequently, the monograph and other collections were moved from the first floor to the second floor, all stacks were removed from the first floor, and more study tables and computer stations filled in some of the first floor's space, adding approximately 90 seats total. With this newly open space on the first floor, HSCL staff and users were better able to envision new uses for the space.

FOCUS GROUP RESULTS

A total of 12 focus group sessions were held, with 45 HSCL users participating. The vast majority of participants were students with 64.4% of participants identifying as graduate or professional students, 26.7% undergraduate students, 4.4% faculty, 2.2% staff, and 2.2% not formally affiliated with the University of Florida. The one non-affiliated individual was the spouse of a UF student and used the library space to study for accounting examinations. Of UF users, participants came from five of the six HSC colleges with no participants from Dentistry, 15.6% from Medicine, 8.9% from Nursing, 44.4% from Pharmacy, 11.1% from Public Health & Health Professions, and 2.2% from Veterinary Medicine. Additionally, 15.6% of participants were from UF colleges outside of the Health Science Center (e.g., College of Liberal Arts and Sciences).

After focus group recordings were transcribed, participants' comments were grouped into the same 13 categories used to analyze the survey results. As with the survey, specific responses may have been assigned to more than one category, depending on their nature. Focus group comment themes are summarized in Figure 4.

[PLACE FIGURE 4 HERE]

Legend: FIGURE 4. Focus group comments by theme

As with the open-ended survey results, computers and technology and furniture were frequent topics of conversation, as were study and meeting rooms and the library's general ambience and comfort level. Although the focus group questions concentrated on the library space, in many of the sessions other aspects of the library's services and collections were explored.

Computers and Technology

Focus group participants, like survey respondents, found great value in the HSCL's existing computers and technology and wanted even more computers to be available. For example, a Medicine faculty member commented that "the few times I've come over here – that's what I was struck by is how many groups of students were clustered around those computers." The computer stations with large-screen monitors are particularly useful, both for looking at images and for working together on projects. This collaboration can even extend to interdisciplinary collaboration, as described by a medical student:

the big screens and the little tables – those are very convenient for group studying and just for looking at slides or, if you have a project, discussing projects. So for medical school students, we have a class called IFH [Interdisciplinary Family Health] where we have to work with the nursing and other professional schools, and we work together well with that.

Focus group respondents' main complaint related to technology was the lack of electrical outlets throughout the space. A nursing student noted, "finding a plug for a computer downstairs is sometimes difficult. I know that now there's like those extension cords, but the further away tables you can't really reach." Additional suggestions included having more computers with dual monitors and an easier way to connect laptops to large-screen monitors.

Furniture

As with the survey, furniture was a major area of criticism, with a number of participants identifying a need for more comfortable seating and additional tables. The new rolling chairs purchased after the survey closed were appreciated by many participants, but there was still a perception that more lounge furniture would be appropriate. As one Nursing student put it, “I like that we have, you know, the rolling chairs, but it’d also be nice if there were some maybe more comfortable chairs to sit in.” Additionally, the newly open space on the first floor was sometimes viewed as needing more furniture. A Pharmacy student’s description mirrors a number of participants’ comments: “I really like the first floor too. I feel like it’s a great collaborative area for people to like meet up in groups. And the thing I notice is – there is a lot of empty space. If there were more tables in there, that’d probably be good.”

Study and Meeting Rooms

Many of the focus group participants make use of the library’s study rooms, and they noted that, even with the seven new study rooms, these rooms were often in short supply. As one Pharmacy student put it, “more group study rooms are needed because a lot of times I would come in with a whole bunch of people and you wouldn’t have any study rooms available.” Additional comments suggested that bigger study rooms would be appreciated as well as computers in each study room. A frequent criticism of the study rooms was that they were not fully sound-proof.

Ambience and Comfort

The library's ambience and overall comfort of users throughout the library were addressed more extensively in the focus group sessions than they had been in the survey responses. Users had a wide range of descriptions of the overall feel of the library. By some, the space was described as being bright, comfortable, clean, and modern. By others, it was described as being unappealing, old, uninviting, and containing too much white. One comment from a Medicine faculty member exemplified the negative impressions of the library's space: "there was a very institutional, prison-like quality about the library, and I think you're gradually breaking that down."

Suggested improvements to the ambience were also wide ranging, including the addition of plants, art on the walls, glass, wood, reading and floor lamps, carpeting, rugs, soft-colored walls, and a more homey feel. For the most part, users appreciated the additional group study space made available on the first floor as a result of the collection shift, but this large open space had an unintended effect on the ambience; according to a Pharmacy student, "on the first floor there's a lot more study space now, but I feel like it's really open and personally that makes me feel like very... self-conscious."

MOVING FORWARD WITH PLANNING AND RENOVATION

After collecting user input through the survey and focus group sessions, designs were developed and finalized in close collaboration with University planners and an architect before renovation began. Administration in the Academic Health Center (AHC) had completed renovations in other areas of the AHC and was supportive of the library's renovation project, but the money needed to proceed was not available in the AHC or HSCL funds. Rather than lose momentum,

library administration chose to continue to develop a plan that could be implemented quickly when money became available; the plan could also be used to attract potential donors.

In the fall of 2011, AHC administration engaged Flad Architects to develop a conceptual design for renovation. At that time, the scope of the project was defined as including only the public areas of the first floor; renovation of staff areas and the other two floors was not expected to be funded. The final focus group session, held in January 2012, offered representatives from Flad the opportunity to present initial drawings and furniture suggestions directly to library users and obtain their feedback. The final conceptual design then incorporated the priorities identified by library users and staff. Although this design was modified slightly due to limitations of the existing infrastructure, additional user input, and staff observations of ways the space is currently being used, this conceptual design has been the guide for renovation.

The final design being implemented emphasizes increased access to technology and power, improved lighting, varied seating, and a more inviting and comfortable atmosphere. Given the repeated requests that more electrical outlets be available, the renovated space will include 32 new floor boxes, providing users access to electricity and data ports for hard-wiring of library computers. The first floor will also house an additional 18 public access computers – five with large-screen monitors for collaborative work and 13 at individual work stations, six of which will have dual screens. Infrastructure improvements include lighting appropriate to a largely open space (as opposed to the previous lighting, which was designed when the stacks were in place), new flooring that will be both attractive and easy to clean, and new paint and wood paneling. Additional group study tables and rolling chairs will add to the collaborative environment on the first floor, as will two new types of furniture: four restaurant-style booths and two large collaborative stations with semi-circular sofa and stool seating, designed to

accommodate groups of six to twelve people. In keeping with users' requests for a comfortable space, the renovated space will also contain new lounge seating to accommodate 12 people. HSCL staff and users alike are looking forward to what the new first floor will offer once renovation is complete: a modern and comfortable space that serves users' needs for collaboration, technology access, and study.

Even with this conceptual design in place, money for renovation was not identified until mid-summer of 2012. In the interim, HSCL staff and university planners moved forward in identifying furniture for purchase and clarifying regulatory requirements for renovation. Final details of the design were determined in August when library staff was asked to select their favorite carpet swatches from over 15 choices. The top three swatches selected by library staff were then put on display boards and easels within the library for students, faculty, and staff to indicate which they liked the best. Their choice was the one selected for installation.

The Three Stage Renovation

The first stage of renovation, asbestos abatement, lasted two weeks starting October 15, 2012. During that time, the bulk of the first floor study space was closed, although the main entrance and Information Desk remained open. On October 29, the south half of the library's first floor was reopened in a native state—concrete floors and semi-open ceilings. During the second stage, November 2012 to January 2013, the south side of the first floor is open for use by students while construction work takes place on the north side of the first floor. In the third stage, January to March 2013, the north side will have been completed with wiring, ceiling makeover, and painting and be open for use, while the south side undergoes renovation. At

completion, a new information/circulation desk will be installed. The completion of the entire project will be celebrated at the end of March 2013. Although a non-phased renovation would have taken less time and money overall, library leadership decided that maintaining study spaces on the first floor during renovation was vital, given the space's high usage.

Communicating about Renovation

Having involved users in space planning through the online survey and focus group sessions, continuing two-way communication about the library's renovation activity was a high priority not only to keep users apprised of renovation progress, but also to reconfirm that user input into the process was highly valued. A communications plan about the renovation was developed and included signs in the library, a continuously running PowerPoint presentation describing the renovation stages, periodic e-mail notices to faculty and student groups via liaison librarians, and a LibGuide on HSCL space <<http://guides.uflib.ufl.edu/space>>.

The HSC Library Space LibGuide has been used to report past and ongoing activities regarding the renovation process. It offers a venue for user comments, provides renovation floor plans and PowerPoint presentations, and gives visual history of the progress to date. Liaison librarians have been engaged to send out renovation-related e-mails as well as share information about renovation progress at appropriate meetings. In order to make up for temporarily lost study space on the first floor, new study spaces were created on the library's second and third floors by converting storage areas and part of the library's staff lounge to public spaces. Information about those locations was posted on the first floor and distributed via the communications plan. Despite these efforts, some students were under the mistaken impression

that the entire first floor would be unavailable for the full six months of renovation and were understandably very concerned.

In addition to ongoing communication via e-mail, LibGuide, and within-library signage, ad hoc meetings have been held between library administration, liaison librarians, and users when space concerns came from specific groups; these meetings have served as yet another venue to share a consistent message about the renovation process and correct misinformation that users have heard. During the first four weeks of renovation, when HSCL staff foresaw the most concern and confusion from library users, a librarian held weekly “talk to us about the renovation” sessions. These sessions provided an opportunity for users to ask questions and hear details about the renovation schedule and planned outcome in person as well as share their concerns and offer suggestions as to how the library could best accommodate them during the renovation. Additional sessions may be scheduled depending on the upcoming progress of the renovation and any changes that would need to be communicated with users.

CONCLUSION

Obtaining user input on space preferences and needs has been valuable to the HSCL throughout its renovation. Although the specifics of HSCL space planning and renovation are unique to one institution, the lessons learned throughout the planning process may be useful to other health sciences libraries undergoing alterations to their physical spaces. Among the lessons learned are:

- Users of academic health science centers have diverse needs and uses of library spaces.
- Assessing user needs and preferences must be an ongoing activity, and communication with users should be continuous.

- Multiple avenues to invite and secure user input are needed.
- Eliciting user input on library spaces may lead to valuable input on other aspects of library services and policies.
- Marketing and communication must be in multiple formats.
- Despite library communication about renovation, users may still harbor misinformation and anxiety. Dealing with such misinformation is an important aspect of library communications plans.
- Data regarding facility use and user needs and preferences is key when working with health science center administrators.
- Collaborating with others in the university (students, administration, and faculty) can lead to long-term benefit, collaboration, and integration of missions.

User input has not only been valuable to the HSCL's space planning and renovation efforts, but has provided an opportunity to demonstrate the value that HSCL staff and administration place on users and their needs. The changes occurring in the HSCL have provided an entrée for librarians to discuss library facilities and promote library services throughout the academic health center; these opportunities are expected to lead to greater collaboration with colleagues in the colleges and departments of the Academic Health Center.

Involving users through developing communication opportunities is essential to the continued relevance of libraries. Such two-way communication provides information about users' opinions, allows librarians to test their assumptions about users' needs, and offers users the opportunity to be partners in developing solutions.¹⁰ Regular communication imparts the value that libraries place on users and their needs. It opens libraries to new opportunities for service and highlights unforeseen user needs. Before a library engages users in such activities,

there must be a commitment for the communication to be continuous, two-way, and substantial; otherwise, users may become jaded and uncommunicative, finding other places to study, research, and collaborate.

REFERENCES

1. Ludwig, L., and S. Starr. "Library as Place: Results of a Delphi study." *Journal of the Medical Library Association* 93, no. 3 (July 2005): 315-326.
2. Ludwig, L. "Health Sciences Libraries Building Survey, 1999-2009." *Journal of the Medical Library Association* 98, no. 2 (April 2010): 105-134.
3. Lynn, V.A., M. FitzSimmons, and C.K. Robinson. "Special Report: Symposium on Transformational Change in Health Sciences Libraries: Space, Collections, and Roles." *Journal of the Medical Library Association* 99, no. 1 (January 2011): 82-87.
4. Gerke, J. and Maness, J.M. "The Physical and the Virtual: The Relationship Between Library as Place and Electronic Collections." *College & Research Libraries* 71(2010): 20-31.
5. Tennant, M.R., B. Auten, C.E. Botero et al. "Changing the Face of Reference: Adapting Biomedical and Health Information Services for the Classroom, Clinic, and Beyond." *Medical Reference Services Quarterly* 31, no. 3 (July-September 2012) 280-301.
6. Foster, N.F., and S.L. Gibbons. *Studying Students: The Undergraduate Research Project at the University of Rochester*. Chicago: Association of College & Research Libraries, 2007.
7. Dowd, J. "LibQUAL+® and the 'Library as Place' at the University of Glasgow." *Research Library Issues: A BiMonthly Report from ARL, CNI and SPARC* (August 2010): 13-20.

8. May, F. "Methods for Studying the Use of Public Spaces in Libraries." *The Canadian Journal of Information and Library Science* 35, no. 4 (2011): 354-366.
9. Bennett, S. "Learning Behaviors and Learning Spaces." *portal: Libraries and the Academy* 11, no. 3 (2011): 765-789.
10. Cullen, R. "Perspectives on User Satisfaction Surveys." *Library Trends* 49, no. 4 (Spring 2001): 662-686.